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NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

MBA PROFESSIONAL REPORT

POTENTIAL COST SAVINGS AND COST AVOIDANCES ASSOCIATED WITH SECURITY COOPERATION TRAINING PROGRAMS

December 2015

By: Michael J. Carroll

Advisors: Latika Hartmann
Ryan Sullivan

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**POTENTIAL COST SAVINGS AND COST AVOIDANCES ASSOCIATED WITH
SECURITY COOPERATION TRAINING PROGRAMS**

Michael J. Carroll, Major, United States Army

Submitted in partial fulfillment of the requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

from the

**NAVAL POSTGRADUATE SCHOOL
December 2015**

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POTENTIAL COST SAVINGS AND COST AVOIDANCES ASSOCIATED WITH SECURITY COOPERATION TRAINING PROGRAMS

ABSTRACT

In this project, I examine the current security cooperation and assistance efforts in the U.S. Africa Command area of responsibility with a particular focus on training of foreign military forces under 10 U.S. Code § 2282. Specifically, I analyze whether the cost of such training programs is cheaper using contracted personnel versus uniformed military personnel. The costs of contractor-provided training come from the Defense Security Cooperation Agency. Using the Department of Defense's Financial Management Regulation, I priced the contractor provided training as if uniformed personnel had performed it to estimate the cost of provision using military personnel. Comparing the two estimates, I found that, in all cases, the contractor-provided price was significantly higher than the cost of uniformed personnel. While this study suggests that contracted services are not always cheaper than using military personnel, future research should incorporate better estimates of the opportunity cost of using uniformed personnel that may change the cost calculations.

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TABLE OF CONTENTS

I.	INTRODUCTION.....	1
A.	OBJECTIVES	1
B.	RESEARCH QUESTIONS.....	1
C.	METHODOLOGY	1
D.	PROJECT OUTLINE	2
II.	SECURITY ASSISTANCE DEFINED.....	3
A.	BACKGROUND	3
B.	DEFINITIONS	3
C.	SECURITY ASSISTANCE ON THE AFRICAN CONTINENT.....	5
D.	STATE DEPARTMENT PROGRAMS.....	6
E.	DEPARTMENT OF DEFENSE PROGRAMS.....	6
III.	LITERATURE REVIEW	9
A.	SECURITY COOPERATION.....	9
1.	How Successful Are U.S. Efforts to Build Capacity in Developing Countries?.....	10
2.	What Works Best when Building Partner Capacity and under What Circumstances?	14
3.	Security Cooperation and Assistance: Rethinking the Return on Investment	15
B.	ECONOMIC SOURCES.....	19
IV.	DATA ANALYSIS.....	23
A.	CONTRACTOR PROVIDED DATA	23
1.	Contract Structure.....	27
B.	COST OF MILITARY PROVIDED SERVICES.....	29
1.	Personnel Costs	30
2.	Travel Related Costs.....	31
C.	COMPARISON OF COSTS	33
1.	Travel Costs.....	34
2.	Personnel Costs	35
V.	CONCLUSIONS AND RECOMMENDATIONS.....	39
	APPENDIX.....	43
	LIST OF REFERENCES.....	45
	INITIAL DISTRIBUTION LIST	47

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LIST OF FIGURES

Figure 1.	U.S. Military Aid Investment in Africa	5
Figure 2.	Levels of Assessment.....	11
Figure 3.	Potential Data Sources for 1206 Evaluation	13
Figure 4.	Services Provided by Contractor X.....	24
Figure 5.	Total Costs of Operator Training in Africa by Contractor X.....	25
Figure 6.	Contractor X Operator Training by Country	26
Figure 7.	Military Cost Breakdown.....	43

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LIST OF TABLES

Table 1.	Growth of Security Cooperation/Building Partner Capacity Programs Since September 11, 2001.....	16
Table 2.	Training Engagements Performed by Contractor X	28
Table 3.	Billable Rate for Army E-7 to be Charged to Agencies Outside DOD.....	31
Table 4.	Estimated Cost of Commercial Travel from North Carolina.....	32
Table 5.	Weekly Per Diem Rates by Country and FY	32
Table 6.	Estimated Commercial Rental Car Rates.....	33
Table 7.	Comparative Cost of Contractor versus Military Cost of Operator Training.....	39

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LIST OF ACRONYMS AND ABBREVIATIONS

AOR	area of responsibility
APRI	Asia Pacific Regional Initiative
ASFF	Afghanistan Security Forces Fund
BPC	building partner capacity
CCF	Complex Crises Fund
CCIF	Combatant Commander's Initiative Fund
CLN	contract line item
COCOM	combatant command
CPI	Consumer Price Index
CRSP	Coalition Readiness Support Program
CSF	coalition support funds
CTFP	Combating Terrorism Fellowship Program
CTPF	Counterterrorism Partnerships Fund
CTR	cooperative threat reduction
DCCEP	Developing Country Combined Exercise Program
DISAM	Defense Institute for Security Assistance Management
DOD	Department of Defense
DSCA	Defense Security Cooperation Agency
ERC	exercise-related construction
ERI	European Reassurance Initiative
FMF	foreign military financing
FMS	foreign military sales
FY	fiscal year
GPOI	Global Peace Operations Initiative
GSCF	Global Security Contingency Fund
ICITAP	International Criminal Investigative Training Assistance
IMET	International Military Education and Training
INCLE	International Narcotics Control and Law Enforcement
ITEF	Iraq Train and Equip Fund
JCET	Joint Combined Exchange Trainings
MBA	Masters of Business Administration
MERHC	Medicare-eligible retiree health care
MODA	Ministry of Defense Advisors

NADR	nonproliferation, anti-terrorism, demining, and related programs
NDAA	National Defense Authorization Act
ODC	other direct costs
OSD	Office of the Secretary of Defense
PKO	peacekeeping operations
PPD	Presidential Policy Directive
SATMO	Security Assistance Training Management Organization
TDY	temporary duty
U.S.C.	United States Code
USAFRICOM	United States Africa Command

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I. INTRODUCTION

A. OBJECTIVES

This project delineates the difference between measuring the effectiveness of security cooperation programs used by the Department of Defense (DOD) and measuring the efficiency of the processes used to deliver those programs. Specifically, I provide a methodology for planners to assist in the “make or buy” decision of foreign military training programs. Similar to private firms, the “make or buy” decision involves tradeoffs between providing services in-house by service members (“make”) vice contracting for the service in the market (“buy”). By comparing the costs of contractor-delivered training with those delivered by organic military forces, I hope to show where opportunities exist for cost savings. Because security cooperation programs within the DOD exist in more than 180 different legislative authorities, it will be difficult to extrapolate the findings to all programs. That said, I hope that the proposed methodology will prove sufficiently adaptable to serve as a base for future planners.

B. RESEARCH QUESTIONS

1. Primary Question

Can significant cost savings be achieved through the contracted delivery of training to foreign militaries as part of the overall U.S. strategy of security cooperation?

2. Secondary Question

Is it possible to measure the efficiency of training programs from a security cooperation standpoint?

C. METHODOLOGY

After a literature review to determine the depth of the body of knowledge related to security cooperation and security assistance, I reviewed the available security assistance programs and selected programs that were representative of the data set for United States Africa Command (USAFRICOM). Contractor-delivered engagements were

priced assuming delivery of training by military personnel. The basis of the pricing determination was the DOD Financial Management Regulation, Volume 15, Chapter 7. I then compared the programs, using business analytic tools, to determine which programs were more efficient in the delivery of training. For the purpose of this assessment, “efficient” is defined as delivering successful training engagements for the lowest possible cost. I selected the segments of the programs (contractor- or military-delivered) that had the highest ratio of efficient to inefficient engagements.

D. PROJECT OUTLINE

Chapter I provides an overview of the project, research questions and methodology of this research project.

Chapter II identifies the history of security assistance programs within the United States and identifies the significance of security assistance programs to U.S. foreign policy.

Chapter III describes the past literature highlighting currently accepted measures of effectiveness and barriers to effective implementation.

Chapter IV provides a detailed analytic case study of the Building Capacity of Foreign Security Forces program codified under 10 U.S.C. § 2282. This program is also known as the Global Train and Equip Program (Section 1206) and was previously found in Pub. L. No. 110-417 § 1206 and Pub. L. No. 112-81 § 1204.

Chapter V concludes with recommendations on using this methodology for other programs, as well as opportunities for future researchers.

II. SECURITY ASSISTANCE DEFINED

A. BACKGROUND

Presidential Policy Directive 23 (PPD-23), signed by President Obama on April 5, 2015, outlines the U.S.' policy on security sector assistance. The policy fact sheet published by The White House states that due to the increasing frequency and complexity of threats encountered worldwide, it is imperative that the United States tailor its security effort in a manner that will provide the greatest return on investment (The White House Office of the Press Secretary, 2013). PPD-23 specifically challenged planners to "Be more selective and use resources for the greatest impact." It demands that conscious decisions regarding resource allocation be made and its performance assessed against well-defined measures of effectiveness.

Security cooperation and assistance programs are generally seen as a force multiplier across various government agencies. When used appropriately as a holistic approach to U.S. foreign policy, these programs have the potential to provide significant cost savings. This Masters of Business Administration (MBA) project examines current security cooperation and assistance efforts in the USAFRICOM area of responsibility (AOR) with a particular focus on training of foreign military forces. By looking at one specific authorization and appropriation available to the USAFRICOM Commander, I will attempt to determine whether there is a significant difference in the costs of this program when services are procured through contracted services rather than through the deployment of organic U.S. forces.

Much of the research previously conducted on costs of foreign military sales and associated programs focused on the material solutions, such as delivery of major end items and sales of military equipment to other nations. The delivery of training services has all but been ignored in previous cost-savings studies.

B. DEFINITIONS

Security assistance includes any program through which the United States provides either material, training, expertise or institution building efforts to foreign

governments. In return, these governments provide consideration toward U.S. policies and objectives (Rand & Tankel, 2015). Security cooperation is actually much broader than this definition implies. It encompasses multiple cabinet level departments and sub-agencies and countless congressional appropriations and authorizations. Security assistance includes programs administered by both the DOD and the Department of State.

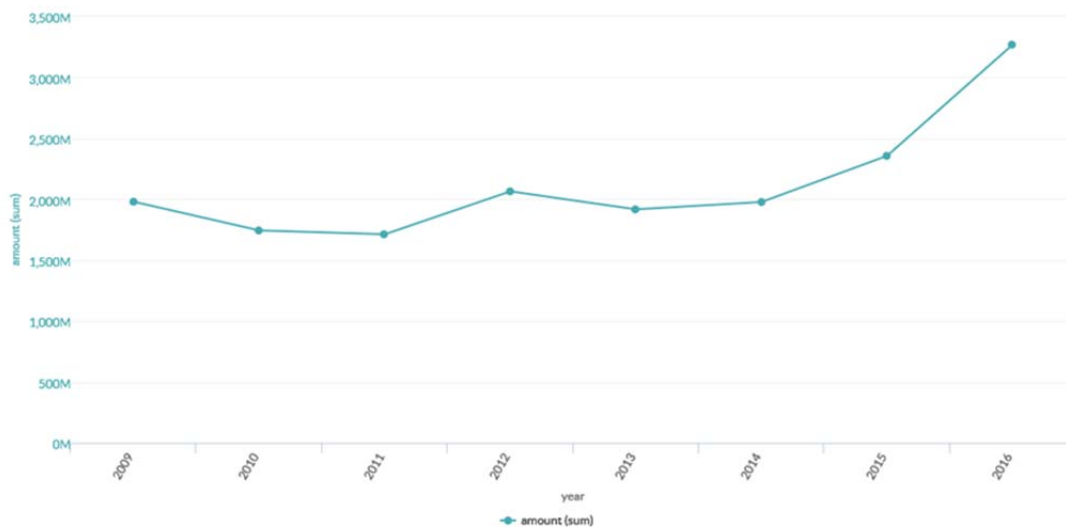
The DOD defines security cooperation as:

Activities undertaken by the Department of Defense to encourage and enable international partners to work with the United States to achieve strategic objectives. It includes all DOD interactions with foreign defense and security establishments, including all DOD-administered security assistance programs, that: build defense and security relationships that promote specific U.S. security interests, including all international armaments cooperation activities and security assistance activities; develop allied and friendly military capabilities for self-defense and multinational operations; and provide U.S. forces with peacetime and contingency access to host nations. (Department of Defense, 2008)

Another term that is often used in conjunction with the training of foreign military forces is “building partner capacity” (BPC). The term was coined during the wars in Iraq and Afghanistan and is often inferred to mean those operations in which the United States provides training and equipment specifically designed to provide increased capability in the counterterrorism arena (Paul et al., 2013, pp. 8–9).

The training of foreign military forces has long been a staple of U.S. diplomatic policy. Recent events in Iraq, Afghanistan, and Syria have raised questions about both the efficiency and effectiveness of this arm of our security cooperation programs. The annual investment of military and police aid from the United States to all countries on the African continent from 2009–2016 is shown in Figure 1. The global total for these authorizations in fiscal year (FY) 2016 total is anticipated to exceed \$18 billion (Center for International Policy, 2015a). With a planned investment of this magnitude, it is imperative that the government find the most efficient way to deliver the required services, and appropriate cost savings and cost avoidances where possible.

Figure 1. U.S. Military Aid Investment in Africa



Source: Security Assistance Monitor. (2015). U.S. military aid investment in Africa. Retrieved from http://securityassistance.org/data/country/military/country/2009/2016/is_all/Africa

Many of the programs included in this total fall outside the broad spectrum of activities normally associated with the DOD. RAND researchers have estimated that of the 165 programs that are included in the security cooperation umbrella, only 47 are relevant to counterterrorism and 64 to defense institution building activities. The remaining programs are related to counter narcotics, border security, or disaster relief. While the DOD may have some ancillary involvement, other cabinet agencies have the lead agency designation for these activities (Moroney, Thaler, & Hagler, 2013).

C. SECURITY ASSISTANCE ON THE AFRICAN CONTINENT

The significance of security assistance programs to the desired diplomatic end-state of the United States in regard to the African continent cannot be overstated. Every combatant commander within the DOD has a mandate to help partner nations with their efforts to build internal security capacity (Joint and Coalition Operational Analysis, 2015). Because the USAFRICOM does not have a contingent of assigned maneuver forces, it is much more reliant upon other programs to provide the requisite experience. The commander of USAFRICOM describes the key elements that enable him to be

successful as his posture, presence, programs, exercises, engagements and operations (United States African Command, 2015).

D. STATE DEPARTMENT PROGRAMS

Security cooperation programs are authorized under either Title 10 or Title 22 of the United States Code (U.S.C.). Programs that derive their authorities from 22 U.S.C. (Foreign Relations and Intercourse) are generally under the purview of the State Department. For DOD to be involved in Title 22 activities, it must partner with other governmental agencies (Moroney et al., 2013, p. 109). Examples of other agencies include the State Department and the U.S. Agency for International Development. While programs operated under Title 22 fall outside the scope of this research project, future researchers may want to compare the effectiveness of Title 22 programs against those administered under Title 10.

E. DEPARTMENT OF DEFENSE PROGRAMS

Programs deriving their authorities from 10 U.S.C. (Armed Forces) do not specifically require partnering, but it is important to note that the programs are part of a much larger engagement plan for the country and will impact State Department efforts in that nation. Specific DOD programs include regional centers for security studies, drug interdiction programs administered under Section 1004, mine action programs, disaster response, and BPC programs under Section 2282. It is also important to note that because of the ability of these programs to impact other State Department led efforts in the partner nations, the conduct of these activities require Secretary of State concurrence to execute.

In the post-9/11 world, the DOD saw a need for a more responsive form of security cooperation that saw prevention of conflicts, as much more cost-effective than responding to them. Former Secretary of Defense Robert Gates testified before Congress in April 2008 and stated, “building partner capacity is a vital and enduring military requirement” Emergency Medical Services (Serafino, 2014). Programs administered under section 2282 fill that need.

In addition to meeting requirements, section 2282 programs are designed to be much more responsive to combatant commanders and their staffs. There have been some initial complaints about timeliness of deliveries but those are centered on articles and not services, such as training.

The Security Cooperation Programs Handbook (FY 2015) published by the Defense Institute of Security Assistance Management (DISAM) describes the purpose of the building capacity of foreign security forces program as increasing the ability of partner nations to complete counter-terrorism and other military operations (Defense Institute of Security Assistance Management, 2015, p. 53). The inclusion of this section in the FY 2015 National Defense Authorization Act (NDAA) establishes the former Section 1206 of the FY 2006 NDAA as a permanent DOD authority. Since Section 2282 includes all the provisions of the former Section 1206, the literature applicable to 1206 is also applicable to 2282. For the purpose of the literature review, I will use the two sections interchangeably. The FY 2015 NDAA authorized up to \$350 million for building capacity programs under Section 2282.

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III. LITERATURE REVIEW

In order to answer the primary research question of possible cost savings in training foreign militaries, it is important to examine the available literature on current program assessment. Much of the available body of knowledge of security cooperation and assistance programs can be divided into two broad categories, those exploring the effectiveness of existing programs and those questioning the need for more programs. In order to keep within the scope of this research project, I will limit the security cooperation portion of my literature review to those sources that specifically address the Global Train and Equip Programs (1206). As mentioned previously, the use of section 1206 is interchangeable with Building Capacity of Foreign Security Forces (10 U.S.C. § 2282).

In addition to the security cooperation portion, I will also review relevant literature from an economic body of knowledge related to the make or buy decision in government procurement. Specifically, I will address how this decision process is different in the public sector from private industry and cite examples of when it could be in the best interest to contract for security cooperation engagements.

A. SECURITY COOPERATION

The first general body of knowledge that I reviewed is dedicated to the concepts of security cooperation. Specific areas of concentration include the definition of security cooperation, the current process for determining appropriate security cooperation venues and assessment strategies.

The assessment strategies for security cooperation are divided into two broad categories, those that assess the effectiveness of the program and those that assess efficiency. There is a rather deep body of knowledge that assesses effectiveness but an extensive study of measures of efficiency seems lacking.

1. How Successful Are U.S. Efforts to Build Capacity in Developing Countries?

This RAND study attempts to provide a clear definition of the 1206 program by completing five main tasks: (1) identifying key stakeholders, (2) survey the stakeholders, (3) conduct a thorough analysis of the survey data, (4) collate the data, and (5) assist with the development of an assessment implementation strategy (Moroney, Grill, Hogler, Kennedy-Boudali, & Paul, 2011, pp. 4–6).

The authors reference the Five Level Assessment Hierarchy developed by Rossi, Lipsey and Freeman as the foundation for their work (Rossi & Freeman, 1989). The hierarchy that the authors used is shown in Figure 2. They see the lower levels as foundational to the success of higher-level assessment. This suggests that for an effective assessment of program cost effectiveness there would already have to be positive assessments of the program need, design, implementation, and outcomes. This potentially explains why the body of knowledge on cost efficiency is lacking and why there is little assistance available for planners to assist with the “make or buy” training decision.

Figure 2. Levels of Assessment

Figure S.1

Five Levels: The Assessment Hierarchy



SOURCE: Adapted from Peter H. Rossi, Mark W. Lipsey, and Howard E. Freeman, *Evaluation: A Systematic Approach*, 7th ed., Thousand Oaks, Calif.: Sage Publications, 2004, Exhibit 3-C. Used with permission.

NOTE: For a detailed discussion of the assessment hierarchy, see Christopher Paul, Harry J. Thie, Elaine Reardon, Deanna Weber Prine, and Laurence Smallman, *Implementing and Evaluating an Innovative Approach to Simulation Training Acquisition*, Santa Monica, Calif.: RAND Corporation, MG-442-OSD, 2006.

RAND TR1121-S.1

Source: Moroney, J. D., Grill, B., Hogler, J., Kennedy-Boudali, L., & Paul, C. (2011). *How successful are U.S. efforts to build capacity in developing countries? A Framework to assess the global train and equip "1206" program*. Santa Monica, CA: RAND—National Defense Research Institute.

The study also argues significant challenges with the implementation of assessments. Causality is the biggest concern of the authors. They point out that it is difficult if not impossible to link specific programs administered under the Section 1206 programs with the successful achievement of administration objectives within the partner nation.

Section 1206 programs are further hampered by the lack of a dedicated automation system to track the assessment of 1206 programs. Most combatant commands have developed local databases to assist with the reporting requirements but these ad hoc systems are not designed to assess overall country impacts of 1206 programs (Moroney et al., 2011, p. 24).

For the purpose of this research, I am most interested in the level five assessment, cost effectiveness. The authors recommend the following three questions as a method of evaluating cost effectiveness:

- How efficient is resource expenditure versus outcome realized?
- Is the cost reasonable relative to the magnitude of the benefits?
- Could alternative approaches yield comparable benefits at a lower cost? (Moroney et al., 2011, p. 14)

Although the study is thorough in its design, it does not give explicit examples on how to answer these questions. Of particular interest to this research project is how to answer the first question. In Table 4–1 of the RAND study, a portion of which is recreated as Figure 3, the authors offers potential sources of data related to demand, resources, costs and objectives. By focusing on the cost data, it might be possible to formulate a make or buy matrix for 2282 planners (Moroney et al., 2011, p. 29).

Figure 3. Potential Data Sources for 1206 Evaluation

Table 4.1
Types of 1206 Program Data That Can Be Collected, by Topic

Topic	Type of Data		
Demand	Acquisition of equipment, supplies, or spares	Discussions with country team members	Project proposal
	Section 1206 Program proposal	Exchange agreement	Proposal development
	After-action reports	Intelligence sources	Quality assurance reports
	Background material	International agreements	Reports to Congress
	Bills of lading or other receipts for the delivery of goods	Lesson plans or other training material	Request for disclosure authorization
	Briefings	Letter of request/letter of acceptance	Request for fund cite
	Budget allocation memo	Master data agreement	Requirements or proposal prioritization document
	Budget projection	Meeting or conference agenda	Security plan
	Budget request	Memorandum of agreement	Site survey reports
	Contract award	Memorandum of understanding	Status, update, IPR, or similar briefings
	Contract performance	Own observations/trip report	Training quotas
	Contract preparation	Participant entry or exit testing	Training reports
	Country desk officers	Project agreement/ arrangement memos	Travel orders
	Discussion with partner-nation representatives		U.S. military trainers
Resources	Acquisition of equipment, supplies, or spares	Contract preparation	Visit request
	Section 1206 Program proposal	Lesson plans or other training material	Proposal development
	Background material	Letter of request/letter of acceptance	Request for disclosure authorization
	Briefings	Master data agreement	Request for fund cite
	Budget allocation memo	Meeting or conference agenda	Requirements or proposal prioritization document
	Budget projection	Project proposal	Security plan
	Budget request		Site survey
Costs	319 funds transfer	Loan agreement	Visit request
	After-action reports	Monthly report	Releasability request
	Annual report	Own observations/trip report	Reports to Congress
	Budget allocation memo	Periodic financial report	Request for fund cite
	Budget projection	Program proposal	Requirements or proposal prioritization document
	Budget request	Programmatic review	Status, update, or IPR report
	Embassy concurrent cable	Progress report	Test and disposition report
	FAA Section 505 agreement	Project final report	Training report
	Financial reports	Quality assurance report	Travel orders
	Human rights vetting request	Quarterly obligation report	Travel vouchers

Source: Moroney, J. D., Grill, B., Hogler, J., Kennedy-Boudali, L., & Paul, C. (2011). *How successful are U.S. efforts to build capacity in developing countries? A Framework to assess the global train and equip “1206” program*. Santa Monica, CA: RAND—National Defense Research Institute.

RAND also noted that the government’s inability to communicate effectively is harming the ability to best implement 2282 programs. In the survey conducted for the

study, only 40% of Office of the Secretary of Defense (OSD) and combatant command (COCOM) level staffs admitted knowledge of other security cooperation programs. This lack of knowledge could cause inefficiencies in the selection of training resources and further highlights the need for a methodical process for the make or buy decision. More importantly, we could have multiple programs trying to achieve the same goals, unsuccessfully.

2. What Works Best when Building Partner Capacity and under What Circumstances?

In this RAND study, the authors explore best practices associated with security cooperation engagements. Unlike the 2282 study mentioned previously, this study did not focus on one specific program but was much more broad in scope. This allowed for a much more robust data set for evaluation. Several of the study's findings will be used in the analysis for this research project.

Paul Clarke et al. (2013), the study's authors, find a strong correlation between a partner nation's ability to provide its own funds and the strength of its economy with success of proposed capacity building programs (p. xvii). This might indicate that contracted teams, or military teams whose costs are reimbursed by partner nations might enjoy more success than solely U.S. funded deployed teams. In order to explore this theory the authors propose the hypothesis "The way in which the United States plans, resources, and executes building partner capacity influences effectiveness" (p. 3).

Of note in this study is the discarded hypothesis "Military-to-military contact is more effective in building relationships than contractor-to-military contact." The authors do not offer specifics about each discarded hypothesis but do state that in general hypotheses were discarded "because we were unable to consistently obtain data of sufficient detail across all cases" (Moroney et al., 2011, p. 33). This discarded hypothesis only addresses the effectiveness of the training engagement and not the efficiency with which it was delivered. That is, assuming that both military-to-military contact is equally effective as contractor-to-military contact, which one is the least expensive to deliver?

Paul's study is ambitious in its scope. It attempts to cover the entire spectrum of BPC missions and authorities over a twenty-year period. While the authors do address some of the shortcomings associated with the time span and changes in other exogenous events, they fail to address specific differences in program resourcing strategies (Paul et al., 2013, p. 47). These differences form the foundation of the question of efficiency of training delivery.

Also not addressed by Paul or his team are the regional concerns that would impact the selection of contracted teams over U.S. military teams. Although it can be inferred from Parent Hypothesis 4 ("The broader context (the geopolitical situation, other neighbors and partners) influences the effectiveness of BPC") Paul never states that decisions other than efficiencies can and must be used to determine the best resource strategy (Paul et al., 2013, p. 72). Political concerns and instability in Libya may lead to the use of contractors for engagements in that country even though the less expensive option might be to deploy U.S. forces.

Like Moroney et al., Paul does an adequate job of assessing measures of effectiveness but fails to address the selection process to determine the most efficient means to deliver the training.

3. Security Cooperation and Assistance: Rethinking the Return on Investment

Rand and Tankel (2015) begin with an examination of the recent history of security cooperation programs within the U.S. government. They are among the first in the body of researchers to note that current level of engagement is unsustainable (p. 2). As the United States continues to draw down the end strength of its military it will become even more important to find the most efficient way to deliver a return on investment for security cooperation programs. The authors point out that policymakers and security cooperation planners must ask what the U.S. end state is and how we can achieve a return on the investment we make in building partner capacity (p. 2).

The growth of security assistance programs since the terrorist attacks of September 11, 2001 is shown in Table 1. Rand and Tankel (2015) point out that while

this gives planners more tools to use it also causes inherent problems. Each of these programs comes with its own set of rules and regulations that govern how and what must be paid by the partner nation. This plethora of programs leads to “the propensity to deploy security assistance and cooperation based on which authorities are available or most flexible, as opposed to choosing the right program for the problem” (Rand & Tankel, 2015). In addition to choosing the correct program, a detailed analysis is required to ensure that the most efficient method of delivery is used.

Table 1. Growth of Security Cooperation/Building Partner Capacity Programs Since September 11, 2001

	PROGRAM	LEGAL AUTHORITY
MAJOR SECURITY ASSISTANCE AND COOPERATION PROGRAMS BEFORE 9/11*	Foreign Military Financing (FMF)	Title 22
	Foreign Military Sales (FMS)	Title 22
	International Narcotics Control and Law Enforcement (INCLE)	Title 22
	Peacekeeping Operations (PKO)	Title 22
	Excess Defense Articles	Title 22
		DoJ program funded and authorized by interagency agreements with State, USAID, and DOD
	International Criminal Investigative Training Assistance (ICITAP)	
	Cooperative Threat Reduction (CTR)	Title 10
	Nonproliferation, Anti-Terrorism, Demining, and Related Programs (NADR)	Title 22
	International Military Education and Training (IMET)	Title 22
	Counter-Drug Assistance (Two authorities: Section 1004, Section 1033)	Title 10
	Joint Combined Exchange Trainings (JCET)	Title 10
	Combatant Commander’s Initiative Fund (CCIF)	Title 10
		Title 10 and 22 depending on program
	Training and education programs	
	Warsaw Initiative Fund	Title 10
MAJOR GLOBAL SECURITY ASSISTANCE AND COOPERATION PROGRAMS AFTER 9/11*	Train and Equip (Section 1206)	
	Reauthorized as Building Capacity of Foreign Security Forces (Section 2282)	Title 10
	Global Lift and Sustain	Title 10
	Support to Foreign Forces (Section 1208)	Title 10
	Logistics Support to Foreign Forces (Section 1210)	Title 10

	PROGRAM	LEGAL AUTHORITY
MAJOR COUNTRY- & REGION-SPECIFIC SECURITY ASSISTANCE AND COOPERATION PROGRAMS AFTER 9/11*	Counterterrorism Partnerships Fund (CTPF)	Title 10
	Combating Terrorism Fellowship Program (CTFP)	Title 10
	Exercise-related programs	
	E.g. Developing Country Combined Exercise Program (DCCEP), Exercise-Related Construction (ERC)	Title 10
	Ministry of Defense Advisors (MODA) Program	Title 10
	Coalition Support Funds (CSF), including Coalition Readiness Support Program (CRSP)—technically reimbursement, not assistance	Title 10
	Global Security Contingency Fund (GSCF)	Pooled State/DOD fund
	Global Peace Operations Initiative (GPOI)	Title 22
	Complex Crises Fund (CCF)	Title 22
	Afghanistan Security Forces Fund (ASFF)	Title 10
	Iraq Train and Equip Fund (ITEF)	Title 10
	Authority to Provide Assistance to the Vetted Syrian Opposition (Section 1209)	Title 10
	European Reassurance Initiative (ERI)	Title 10
	Asia Pacific Regional Initiative (APRI)	Title 10

Adapted from: Rand, D., & Tankel, S. (2015, August 5). Security cooperation and assistance. Retrieved from <http://www.cnas.org/security-cooperation-assistance#.VhPvUjZdEus>

Rand and Tankel (2015) deliver 10 specific policy recommendations that focus on creating a more effective program but not necessarily a more efficient one. The recommendations are:

1. Consolidate, rationalize, and rebalance the many security assistance and cooperation authorities.
2. Undertake regional reviews of security assistance and cooperation programs.
3. Increase the use of regionally appropriated funds for assistance and cooperation where appropriate.
4. Improve interagency coordination and enhance State's capacity to manage security assistance programs.

5. Focus on specific implementation goals for the PPD 23 to connect military and non-military goals.
6. Revise IMET and focus more on professionalizing military and civilian security institutions.
7. Invest in a consistent policy for promoting accountability among U.S. security partners.
8. Invest early and focus more on “headware” than “hardware” for military BPC.
9. Use positive conditionality proactively.
10. Develop a systematic, interagency method of tracking outcomes (p. 24).

While the majority of the recommendations do not specifically address the selection of the most efficient means of delivery it can be inferred by some of the recommendations that the authors did consider efficiency.

In their explanation of their first recommendation, the authors suggest that the current system lacks coordination particularly in the selection of appropriate programs (Rand & Tankel, 2015, p. 24). The authors mention that the overall security cooperation effort would benefit from consolidation of the various authorities. It also mentions the selection of appropriate regional budgetary funds. This is one of the few discussions in the literature that mentions selection of funding as a consideration. In addition to the proper selection of funding, the proper selection of training team type is crucial.

The third recommendation, “increase the use of regionally- appropriated funds for assistance and cooperation where appropriate” also suggests that the selection of contracted personnel should be considered. Rand and Tankel (2015) explain that U.S. assistance could overwhelm some sub-regional institutions (p. 25). The presence of uniformed military in some these institutions may do serious harm to the overall goal of the program making military to military engagement much less efficient overall.

Even though Rand and Tankel conclude by stating that future administrations are extremely likely to continue to rely on security cooperation efforts, there is little discussion on making the programs more efficient (2015, p. 28).

B. ECONOMIC SOURCES

In addition to literature covering the basics of security cooperation, I reviewed literature concerning the economic aspects of the make or buy decision process. Specifically, I explored the differences of the make or buy decision-making process in public sector organization compared to private corporations.

The determination of the make or buy decision is vastly different in government than it is in private sector operations. The decision is particularly different in the realm of contracting for services. In this article, Shleifer (1998) offers a brief historical look at the theories for and against the state ownership of “strategic” sectors (p. 134). While training may not be considered a strategic sector along the lines of the steel, energy, telecommunications and financial services mentioned in the article, the training of foreign militaries is a strategic component of the execution of foreign policy and therefore relevant to this research.

Shleifer (1998) initially offers the idea that private execution of services is in the best interest because they are often a source of innovation and increased efficiency (p. 135). While this may be a true statement in a variety of stateside service contracts, the ability of a contractor to innovate in the delivery of foreign military training is diminished because of the likelihood of disrupting policies and interfering with the delicate nature of international relations. This seems to be at odds with Shleifer’s argument that a reduced role in production by the government is apparent (p. 136).

In the next section of the article, Shleifer (1998) tackles “The Desirable Scope of a Benevolent Government.” He examines the public education system and compares the ideas of selectivity of private schools and the implications of the voucher system. While not a perfect correlation to foreign military training, Shleifer (1998) does offer that “With perfect contracting and regulations, there is no difference between state and private provision of goods and services” (p. 137). Perfect contracting does not exist in even the most mundane of environments. It has no chance in the dynamic world of foreign relations. Often the subject being requested by a partner nation will change and evolve over the course of the contract period. Changes in international law or state priorities will

dictate changes to the scope of the contract. The U.S. domestic election cycle also will have influence on the choice of nations with which we interact. The utopian world of “perfect contracting” will never exist.

The idea from the Shleifer (1998) article that is most exportable to this research is the idea of “non-contractible quality” of a contract line item. A non-contractible quality is any unmeasurable or intangible expectation of the deliverables from a contract. Shleifer offers examples, such as treatment of inmates by a prison staff, drinkability of water from a utility company or the innovation of a car company (p. 137). For a foreign military training engagement, types of non-contractible quality could include ability to integrate with a coalition staff, interoperability with U.S. forces and strength of relationships built at the tactical level.

The need for a positive return on these non-contractible quality issues is usually more important than the cost reductions that would be associated with contracted service suppliers. Shleifer uses the example of a private school that has been incentivized for cost savings using less qualified teacher aides instead of fully qualified teachers (Shleifer, 1998, p. 138). As devastating as the consequences of that would be, imagine the outcome of substituting a less qualified instructor when instructing on the law of war or when teaching the senior staff of another country’s armed forces.

Shleifer (1998) finally offers a set of circumstances for which it is superior for the government to provide the service over a contract provider.

1. Cost reductions would result in an unacceptable drop in non-contractible quality
2. The need for innovation is non-existent or unimportant
3. There is little competition
4. The need for reputation within the market is weak (p. 140)

A combatant commander’s security cooperation plan exists in the world described above and is a perfect example of when a service should be provided by the government. First, utilization of less than qualified personnel to save shareholder revenue could result in training that violates international law and lead to human rights violations. Second,

contractor innovation not only is unimportant, it is discouraged. Third, due to vetting of service providers by various government agencies, security clearance and travel clearance requirements and visa processing times the ability to change contractors is greatly diminished.

Shleifer (1998) ends this portion of the article with an extremely important caveat that is particularly applicable to security cooperation activities. He states that in situations where the government does not know the true nature of the requirement and neither cost efficiency nor innovation are important, then government provision of the service is probably the most beneficial route (p. 141).

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IV. DATA ANALYSIS

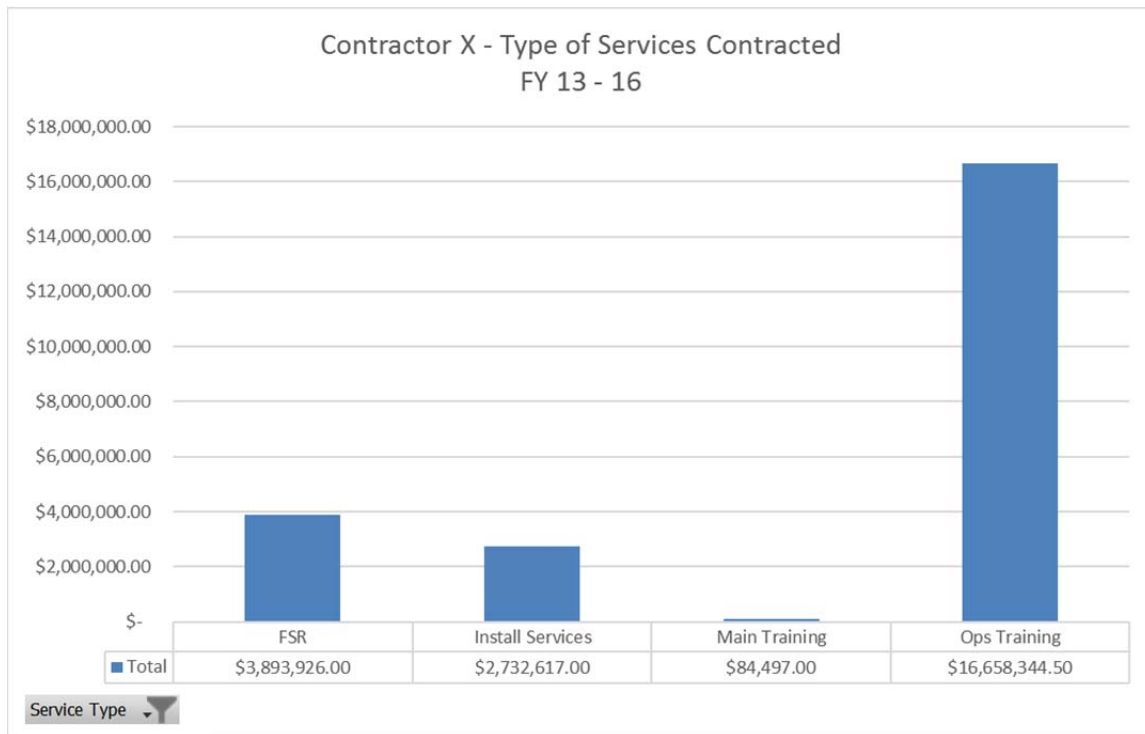
I first selected the COCOM that would most freely lend itself to scrutiny of security assistance programs. FY 2016 has seen a significant increase in the requested funding for assistance to African nations. Since DoS does not divide the globe in COCOMs as DOD does, it is difficult to isolate the total amount of funding attributed to a COCOM, but in the period from FY 13 to FY 16, estimates suggest that funding levels in Sub-Saharan Africa will increase from \$112 million to \$1.13 billion. Similarly, funding for Middle East and North African countries increased by approximately 20% to a total of \$2.28 billion (Center for International Policy, 2015b). Because of the growth of U.S. interests in Africa and the subsequent growth of security assistance funding being directed toward USAFRICOM, I selected USAFRICOM for further analysis.

After selecting the COCOM, it was necessary to solicit the data from both government and contractor sources. In order to assess the current process, it was necessary to find data sources that were willing to share enough data to make a statistically significant sample. Because government contractors have an obligation to their shareholders to protect proprietary data, such as cost and pricing data associated with government contracts, finding willing donors of information proved challenging. In order to preserve trade secrets associated with the services provided, I have agreed to redact the name of any contractor providing data and to limit the amount of data released as a part of this study.

A. CONTRACTOR PROVIDED DATA

Contractor X provided a data set indicating that they have provided services in four different categories: field service representative, installation, maintenance and operator training. Figure 4 shows the contracted cost services by type billed by the contractor to the government.

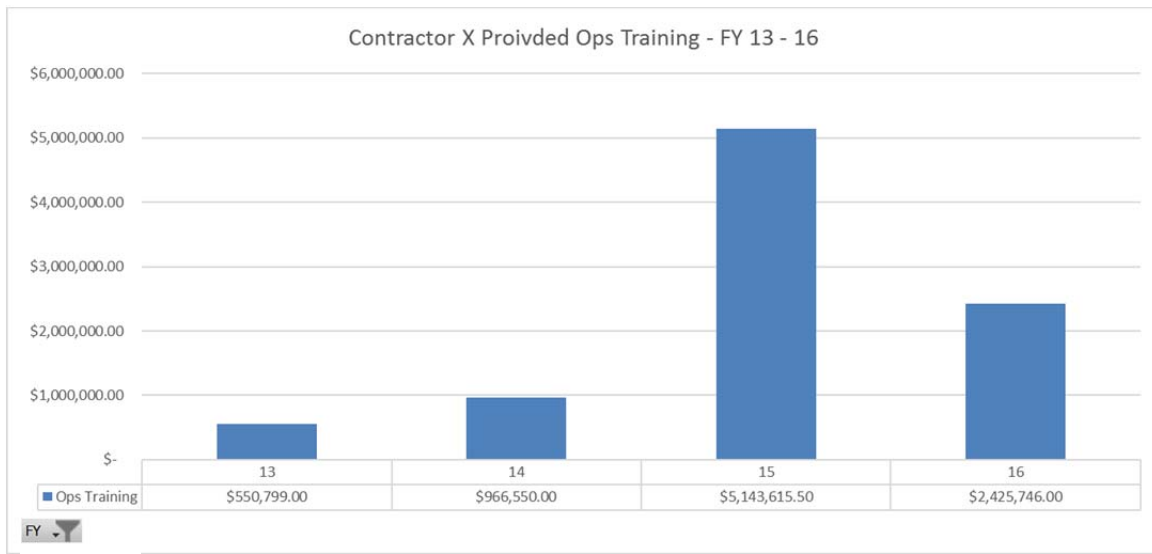
Figure 4. Services Provided by Contractor X



I determined that it was not appropriate to include field service representative services in the evaluation because of the proprietary nature of the services that these individuals provide. Due to limitations on technical data rights and contract limitations, the government is unable to provide these specific services. Similar arguments can be made for the installation services. Although it is feasible for military service members to provide some maintenance training, the total spent on this line was only 0.36% of the total expenditures. I did not consider this amount significant enough to include in the analysis. For these reasons, I focused only on the operator training services provided by Contractor X.

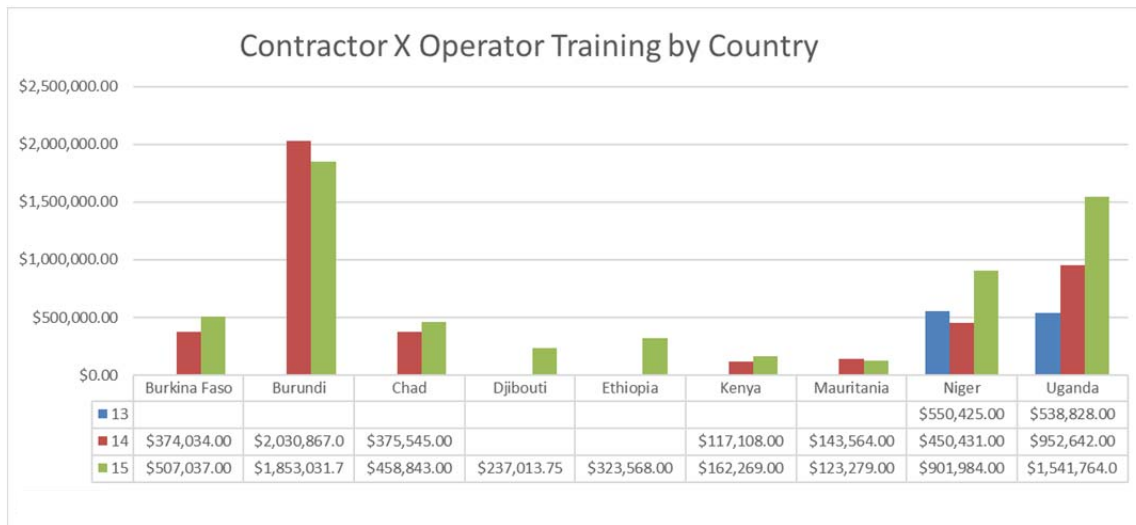
Figure 5 shows the total expenditures by FY of Contractor X provided operator training services for which the government has paid a final invoice. There is an approximate \$7.5 million discrepancy between the two totals for operator training. This discrepancy represents those services that have not been invoiced to the government. They are listed by the contractor as either pending or underway. Since final cost and price data is not available for these services they have been excluded from the analysis.

Figure 5. Total Costs of Operator Training in Africa by Contractor X



Contractor X provided these completed services in ten African nations as indicated in Figure 6. There are several possible explanations for the jump in the level of contracts for FY 15. The budgeting process employed by the government is completed using a five-year cycle. Since USAFRICOM began operations in 2009, FY 2015 would be the first year that its own priorities were captured as a part of the budgeting process. FY 15 was also the year that section 2282 became a permanent appropriation authority so there was a department wide push to increase the use (Serafino, 2014).

Figure 6. Contractor X Operator Training by Country



The contractor priced the services in accordance with the indefinite delivery indefinite quantity contract vehicle that was in place for world contracts. Under this arrangement, the contractor provided the required services for the same price regardless of place of performance.

The figure suggests that the countries of Burundi, Niger, and Uganda receive a greater proportion of overall training funds than other African nations. The training reflected in this graph is specific operator training on a specific piece of specialized gear. Other contractors operating on the African continent could be providing services at greater levels to the other countries annotated in Figure 6 or to other countries not reflected here. Nations, such as Burkina Faso, Chad, Djibouti, or Mauritania, appear to be underrepresented. Reasons for this may be that these nations do not possess large numbers of the equipment for which Contractor X provides training. Their militaries may not be ready for the specific level of training that the contractor provides. It is important not to lose sight of the fact that the level of spending within an individual country does not necessarily reflect the efficiency of the training delivery.

Additionally, one of the engagements listed in Niger in FY 15 was a yearlong engagement. This is the only yearlong operator training engagement listed by Contractor X and skewed the total cost of data reported for Niger. The other yearlong engagements

listed by Contractor X were field service representative type engagements and excluded from this analysis.

1. Contract Structure

The contract was structured as a multiple award task order contract with multiple contract line items (CLNs). Contractor X offered training packages that varied according to the number of trainers required and the number of weeks of training. A standard package for operator training is two personnel for a two-week period, but each training engagement is tailored to the needs of the customer country. Table 1 shows the breakdown of trainers and length of engagement used for the analysis.

Table 2. Training Engagements Performed by Contractor X

Country	Service Type	Manpower	Duration	FY	Cost
Niger	Ops Training	2 Eng	2 Weeks	13	\$ 98,397.36
Uganda	Ops Training	2 Eng	2 Weeks	13	\$ 85,425.00
Uganda	Ops Training	2 Eng	4 Weeks	13	\$153,597.72
Uganda	Ops Training	2 Eng	1 Week	13	\$ 70,797.18
Uganda	Ops Training	2 Eng	4 Weeks	13	\$153,597.72
Burkina Faso	Ops Training	1 Eng, 1 Trans	1 Week	14	\$ 66,176.00
Burundi	Ops Training	2 Eng	1 Week x 5	14	\$ 69,409.00
Burundi	Ops Training	2 Eng	1 Week x 5	14	\$ 69,409.00
Burundi	Ops Training	1 Eng 1 Trans	2 Weeks	14	\$ 96,468.00
Chad	Ops Training	2 Eng	3 Weeks	14	\$146,385.00
Kenya	Ops Training	2 Eng	3 Weeks	14	\$117,108.00
Mauritania	Ops Training	1 Eng	2 Weeks	14	\$ 47,096.00
Mauritania	Ops Training	2 Eng	2 Weeks	14	\$ 96,468.00
Niger	Ops Training	2 Eng	4 Weeks	14	\$142,573.00
Uganda	Ops Training	2 Eng	2 Weeks	14	\$115,458.00
Burkina Faso	Ops Training	2 Eng	3 Weeks	15	\$121,137.00
Burundi	Ops Training	2 Eng	2 Weeks	15	\$115,457.00
Burundi	Ops Training	2 Eng	2 Weeks	15	\$115,457.00
Burundi	Ops Training	2 Eng	2 Weeks	15	\$142,226.00
Burundi	Ops Training	2 Eng	2 Weeks	15	\$118,493.00
Burundi	Ops Training	2 Eng	2 Weeks	15	\$118,521.25
Burundi	Ops Training	2 Eng	2 Weeks	15	\$118,492.50
Djibouti	Ops Training	2 Eng	2 Weeks	15	\$118,521.25
Djibouti	Ops Training	2 Eng	2 Weeks	15	\$118,492.50
Ethiopia	Ops Training	1 Eng	6 Weeks	15	\$111,816.00
Ethiopia	Ops Training	2 Eng	2 Weeks	15	\$ 94,794.00
Mauritania	Ops Training	2 Eng	2 Weeks	15	\$ 91,642.00
Niger	Ops Training	1 Eng	1 Year	15	\$591,213.00
Niger	Ops Training	2 Eng	2 Weeks	15	\$ 94,817.00
Niger	Ops Training	2 Eng	2 Weeks	15	\$ 94,817.00
Niger	Ops Training	2 Eng	3 Weeks	15	\$121,137.00
Uganda	Ops Training	2 Eng	2 Weeks	15	\$115,458.00
Uganda	Ops Training	1 Eng	3 Weeks	15	\$243,403.50
Uganda	Ops Training	1 Eng	3 Weeks	15	\$243,403.50
Uganda	Ops Training	1 Eng	2 Weeks	15	\$ 52,679.00
Chad	Ops Training	2 Eng	4 Weeks	16	\$152,551.00

Prices listed were quoted in the base year of the contract award, FY 13. Agreed upon prices were adjusted annually by an escalation factor of 3.44% as a negotiated contract condition. The CLNs can be further broken down into labor rates for the period of instruction, labor rates during required travel, travel costs for transportation, travel costs for per diem, and other direct costs. In addition to the base costs associated with the contracts, Contractor X is entitled to a 25% premium for countries identified as hazardous duty locations and a 50% premium for countries identified as war zones. For the period of the analysis, the countries of Burundi, Chad, Djibouti, Ethiopia, Kenya, Mauritania, Niger, Somalia, and Uganda qualified as hazardous areas. No countries in the USAFRICOM AOR qualified as war zones.

Since the analysis occurs over multiple year, I selected a base year of FY 15 and normalized all other years' data from "then year" data to FY 15 data. Those totals are reflected in Table 2. In order to normalize the data, I used the Bureau of Labor Statistics Inflation Calculator tool to determine the value of \$1.00 of "then year" money in 2015 rates. Using the Consumer Price Index (CPI) to compute the change in value, I determined that the value for \$1.00 of 2013 money became \$1.02 in 2015. For 2014 and 2015, there was no change in the value (CPI Inflation Calculator, 2015). For the 2013 values, I multiplied the contracted price supplied by Contractor X by the \$1.02 to arrive at the totals listed in Table 2.

B. COST OF MILITARY PROVIDED SERVICES

In order to properly compare the costs of contracted provided services, I manually computed the cost of services for a military organization to provide the same level of services. In order to establish a baseline level of military support the following assumptions were used in determining prices.

The military trainers would have to be equally effective at delivering the course content as the contractor personnel. Within the Army, the noncommissioned officer is primary trainer of Soldier tasks (U.S. Army, 2015). For this reason, it is assumed that the trainers selected to conduct this training will be noncommissioned officers. Since the training will happen in an autonomous setting without a significant amount of leadership

involvement, it is essential that the team of instructors will include organic leadership and maintain a level of maturity that may not be developed in more junior Soldiers. For these reasons, I assumed that training would be conducted by senior noncommissioned officers of the rank of Sergeant First Class (paygrade of E7).

The U.S. Army Security Assistance Training Management Organization (SATMO) is a brigade-sized unit assigned to Fort Bragg, North Carolina. They are tasked with providing the Army's portion of training foreign nations in response to requests from partner nations and requirements received from Defense Security Cooperation Agency (DSCA) (U.S. Security Assistance Training Management Organization, 2015). I have assumed that SATMO will provide the services requested and that all Soldiers' temporary duty (TDY) travel will originate at Fort Bragg. This assumption will be used to calculate actual travel costs.

Soldiers are considered salaried workers and are paid the same rate for travel time as they are for time spent preparing and delivering training. Military provided services will not have separate personnel costs for travel time and time spend performing instructional duties.

Contractor X provided information concerning other direct costs (ODC). The contractor explained that these costs included costs to print materials, special tools, or equipment required for training and costs associated with visas and passports. Since military trainers would incur the same costs, I assumed these costs to be irrelevant and excluded them from the analysis. The totals in Table 2 do not include the ODC.

1. Personnel Costs

Personnel costs for comparable military personnel were computed using the appropriate FY military personnel composite standard pay and reimbursement rates in accordance with Volume 15, Chapter 7 of the DoD Financial Management Regulation (Department of Defense, 2011). The personnel rates for the E-7 paygrade are recreated in Table 3. The daily rate was computed by applying a factor of 0.00439 to the published annual costs. The daily rates were then multiplied by 7 to compute the weekly rate. Since

Contractor X provided duration data in weeks, I will use the weekly computation rate normalized to FY 15 dollars as described earlier in this paper.

Table 3. Billable Rate for Army E-7 to be Charged to Agencies Outside DOD

	FY 13	FY 14	FY 15
Army E-7 Paygrade Annual Rate	\$ 115,182	\$ 117,182	\$ 116,902
Army E-7 Paygrade Daily Rate	\$ 505.65	\$ 514.43	\$ 513.20
Army E-7 Paygrade Weekly Rate	\$ 3,539.54	\$ 3,601.00	\$ 3,592.40
Normalized Weekly Rate	\$ 3,610.33	\$ 3,601.00	\$ 3,592.40

In addition to the base pay, military members assigned to certain countries are authorized hazardous duty location pay. For the majority of countries listed in Table 4, the monthly amount is paid is \$100.00. For the countries of Burkina Faso and Mauritania, the amount is \$150.00. These amounts are paid as a full monthly entitlement for spending any period of the month in the country. The total amount spent cannot be prorated.

2. Travel Related Costs

Military costs are computed for each individual location that the training occurs in. This varies greatly from the commercial practice of pricing contracts for worldwide execution. Because historic indexes of commercial flight prices are not readily available, I have priced the flights using current commercial prices from North Carolina to each country and then applied the appropriate CPI computations for price normalization as described previously.

Table 4. Estimated Cost of Commercial Travel from North Carolina

Country	Airport City	Airport Code	FY13 (in FY 15 \$)	FY 14	FY 15
Burkina Faso	Ouagadougou	OUA	\$ 1,624.84	\$ 1,658.00	\$ 1,658.00
Burundi	Bujumbura	BJM	\$ 2,670.50	\$ 2,725.00	\$ 2,725.00
Chad	N'Djamena	NDJ	\$ 2,365.72	\$ 2,414.00	\$ 2,414.00
Djibouti	Ambouli	JIB	\$ 1,767.92	\$ 1,804.00	\$ 1,804.00
Ethiopia	Addis Ababa	ADD	\$ 1,309.28	\$ 1,336.00	\$ 1,336.00
Kenya	Nairobi	NBO	\$ 1,485.68	\$ 1,516.00	\$ 1,516.00
Mauritania	Nouakchott	NKC	\$ 2,744.00	\$ 2,800.00	\$ 2,800.00
Uganda	Entebbe	EBB	\$ 1,495.48	\$ 1,526.00	\$ 1,526.00
Somalia	Mogadishu	MGQ	\$ 3,054.66	\$ 3,117.00	\$ 3,117.00
Niger	Niamey	NIM	\$ 1,663.06	\$ 1,697.00	\$ 1,697.00

In order to compute weekly per diem costs for each location, I determined the daily per diem rate in effect in each country on October 1 of the appropriate FY (Defense Travel Management Office, 2015). I then multiplied the daily rate by 7 to determine the appropriate weekly rate that is reflected in Table 5.

Table 5. Weekly Per Diem Rates by Country and FY

Country	Location	FY 13	FY 14	FY 15
Burkina Faso	Ouagadougou		\$1,806.00	\$1,862.00
Burundi	Bujumbura	\$1,309.00	\$1,309.00	\$1,309.00
Chad	N'Djamena	\$2,653.00	\$2,618.00	\$2,289.00
Djibouti	Ambouli	\$2,387.00	\$2,387.00	\$2,401.00
Ethiopia	Addis Ababa	\$2,800.00	\$2,800.00	\$2,800.00
Kenya	Nairobi	\$2,870.00	\$2,870.00	\$2,870.00
Mauritania	Nouakchott	\$1,477.00	\$1,533.00	\$1,428.00
Uganda	Entebbe	\$2,205.00	\$2,380.00	\$2,380.00
Somalia	Mogadishu	\$1,456.00	\$1,456.00	\$1,456.00
Niger	Niamey	\$1,232.00	\$1,407.00	\$1,232.00

The final transportation related cost is payment of rental cars. Like the flight costs determined previously, there is no definitive source of historical prices for rental vehicles in African countries. I used commercially available prices in effect in November 2015 and normalized the prices for 2013 pricing. The weekly costs for one economy vehicle is listed in Table 6. For those countries that do not list a price, there are no rental facilities available within the country.

Table 6. Estimated Commercial Rental Car Rates

Country	Location	FY 13	FY 14	FY 15
Burkina Faso	Ouagadougou	\$610.56	\$623.02	\$623.02
Burundi	Bujumbura	\$177.81	\$181.44	\$181.44
Chad	N'Djamena			
Djibouti	Ambouli	\$494.32	\$504.41	\$504.41
Ethiopia	Addis Ababa			
Kenya	Nairobi	\$451.84	\$461.06	\$461.06
Mauritania	Nouakchott	\$450.53	\$459.72	\$459.72
Uganda	Entebbe	\$651.70	\$665.00	\$665.00
Somalia	Mogadishu			
Niger	Niamey	\$1,365.14	\$1,393.00	\$1,393.00

C. COMPARISON OF COSTS

An analysis of the costs in sections A and B of this chapter shows that there are significant differences in the cost of contractor-provided services when compared to those provided by organic military forces. In order to assess these differences properly, it is important to understand first their nature and magnitude. Some differences are based upon the differences of direct personnel costs while others are attributable to limitations of the current contracting process. In this section, I first outline the differences and then to show how future planners can capitalize on this knowledge.

Because of the need to protect the proprietary strategy of Contractor X, it is not feasible to offer a line-by-line comparison of the actual costs. I will, in general terms, explain the difference in the pricing of the contractor provided engagements and the methodology used to determine the military price structure.

1. Travel Costs

Travel costs for the contractor were computed as part of a pricing strategy for an ID/IQ contract. The pricing was made to ensure that the contractor would make an adequate profit on all contract engagements. Because the contractor was not bidding on a specific engagement but on the opportunity to provide service for future engagements, it was forced to bid a price that would ensure its costs would be covered regardless of travel costs. In addition to not knowing the destination airfield, it is likely that the contractor has offices in multiple locations within the United States. It is feasible that the trainers could reside in different cities and the origin airfield might not be known to the contractor when it proposed its prices.

The pricing of the military engagements was significantly different in this regard. The organization within the U.S. Army that would provide the specific training is headquartered at Fort Bragg, North Carolina. This allows for 100% certainty of the origin airfield. Since I priced already completed training objectives using historical data, the destination was also known. This removed uncertainty from the equation and allowed for the selection of the most economical tickets. Even with knowledge of the origin and destination airfields, the cost of airfare for these engagements climbed as high as \$5,600.00. It is possible that the contractor was forced to make assumptions that would drive the price of its estimated airfare much higher than this.

Similar arguments can be made for the cost of rental cars to support the training teams. Because of restrictions on driving in some countries, the rental of a vehicle mandates the hiring of a local driver. In just the 10 countries included in this analysis, the cost of hiring a car for a week ranges from \$181.44 in Burundi to \$1,393.00 in Niger. Since the contract was solicited as a fixed price contract and not a cost reimbursable contract, Contractor X was again forced to propose a price that would allow for a profit despite the wide range of costs incurred for rental vehicles. Three countries do not have rental vehicles available. In these three cases, I removed the prices from both the contractor's and military's pricing strategy.

Military pricing of these specific engagements was completed after the training had been completed. This removed all the financial risk from the equation. It would be difficult to establish a risk premium to include into the military pricing strategy that would adequately capture the risk the contractor assumed in pricing its travel costs.

2. Personnel Costs

While travel related costs were significant, the largest proportion of cost savings came from personnel costs. These personnel costs can be broken down into two distinct groups; per diem costs and pay and allowances.

Per diem costs, like other travel related costs are location based. Because of this, they subject the contractor to the same financial risk concerns as the rental car and transportation costs. Daily per diem rates varied greatly in the ten countries of this analysis. In FY 15, those rates range from \$176.00 per day in Niamey, Niger to \$410.00 in Nairobi, Kenya. Further complicating matters is the fact that some countries have multiple per diem rates that vary by location and time of year. The Defense Finance and Accounting Service publish new rate tables every two weeks. Fluctuations for changes in the exchange rates and other world economic events are commonplace. I priced military engagements as if they took place on October 1 of each year, using rates published by the Defense Finance and Accounting Service, but contractors do not have that luxury. They must determine the price they will propose based upon a worldwide average and still hope to make enough profit to satisfy their shareholders.

In addition to the uncertainty of frequently changing per diem rates, the contractors are authorized by contract to raise their prices 3.44% each year. This rate elevation far surpasses the annual military pay increases for the last several years. Since 2011, the average military pay raise has been 1.34% with a peak of 1.7% in 2013. For the last two years, the raise has been capped at 1.0% (Katz, 2014). This means that contractor personnel rates, already higher than uniformed personnel rates, are climbing and continue to outpace military rates. Some critics may question if the military rates being used in this study are artificially low. Do the rates, as applied in this study accurately capture all the overhead costs associated with fringe benefit packages? I believe that these costs are

appropriately covered. Proof of this coverage is found in note 3 of the Military Composite Standard Pay and Reimbursement Rates. The note says:

The annual rate billable to Other Federal Agencies recovers additional military related health care costs financed by the Defense Health Program. The annual billable rate includes an acceleration factor of \$10,563 for all personnel. Reimbursement of the acceleration factor shall be deposited into the Defense Health Program (97*0130). Excludes a per capita normal cost of \$3,701 for MERHC (Medicare-eligible retiree health care) accrual. (Department of Defense, 2011)

The application of this note shows that I have considered all appropriate personnel cost categories. The uniformed personnel costs, because they are specific to each engagement, will continue to be much smaller than the contractor.

Another area for which there is a significant difference between the contractor and government pricing strategy is in the handling of the hazardous duty risk premium. U.S. military personnel are expected to operate in hazardous areas as a portion of their basic job description. For certain areas of the world, the military is authorized to pay its members a hazardous duty pay of up to \$150. The rules vary for payment depending upon the type of orders the personnel are operating under. For the types of engagements involved in this analysis, military members are typically sent on TDY orders. Under these types of orders, payment is not made until a Soldier has completed 30 days of operations in the country. For this analysis, I assumed that each member would be in the country long enough to qualify for payment. Even at the highest pay rate of \$150.00 per month, the cost of this payment is negligible.

Contractors are paid to assume the risk of a hazardous duty area at a much higher rate. In accordance with the contract, Contractor X is authorized a hazardous premium of 25% of the contract cost. Using a standard training engagement of two instructors for two weeks, the cost of the hazard premium could be as much as \$25,557.00. This would be more than \$50,000.00 for the month. This premium far exceeds the uniformed cost of 300.00 for the same level of service.

The contract for these training engagements was awarded as a fixed price contract. This strategy forced the contractor to price the engagements with the most

expensive scenario as a distinct possibility. This includes flights to a remote airfield, in a country that has no rental vehicle industry or requires the use of a local driver and is listed as a hazardous area. Pricing strategies must include the opportunity for the contractor to make an adequate profit. This reality means that contracted engagements will be more expensive than military engagements.

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V. CONCLUSIONS AND RECOMMENDATIONS

Given the data provided in Chapter IV, I was able to compare the costs of 36 training engagements for which Contractor X provided services. In all 36 engagements, the price of contracting for these services was significantly higher than if the services had been provided by uniformed military personnel. The summation of the results is included in Table 7. A detailed breakdown of the cost for military provided services has been placed in the Appendix. It is important to note that this study only looks at the financial considerations and not the true economic costs associated with conducting security assistance operations. Decisions on the employment of military force, even in a training capacity, should never be made strictly based upon financial considerations. Contracting for training services is an important tool for security cooperation officers to understand. The successful employment of contractors is an important force multiplier for the combatant commander. Understanding the financial aspects is one small part of the equation.

Table 7. Comparative Cost of Contractor versus Military Cost of Operator Training

Country	Contractor X Personnel	Duration	FY	Contractor X Cost	Military Total Cost	Cost Savings
Niger	2 Eng	2 Weeks	13	\$98,397.36	\$25,725.72	(\$72,671.64)
Uganda	2 Eng	2 Weeks	13	\$85,425.00	\$27,755.68	(\$57,669.32)
Uganda	2 Eng	4 Weeks	13	\$153,597.72	\$52,320.40	(\$101,277.32)
Uganda	2 Eng	1 Week	13	\$70,797.18	\$15,473.32	(\$55,323.86)
Uganda	2 Eng	4 Weeks	13	\$153,597.72	\$52,320.40	(\$101,277.32)
Burkina Faso	1 Eng, 1 Trans	1 Week	14	\$66,176.00	\$15,053.02	(\$51,122.98)
Burundi	2 Eng	1 Week	14	\$69,409.00	\$16,093.02	(\$53,315.98)
Burundi	2 Eng	1 Week	14	\$69,409.00	\$16,093.02	(\$53,315.98)
Burundi	1 Eng 1 Trans	2 Weeks	14	\$96,468.00	\$26,536.04	(\$69,931.96)
Chad	2 Eng	3 Weeks	14	\$146,385.00	\$42,342.00	(\$104,043.00)
Kenya	2 Eng	3 Weeks	14	\$117,108.00	\$43,441.18	(\$73,666.82)
Mauritania	1 Eng	2 Weeks	14	\$47,096.00	\$27,355.44	(\$19,740.56)

Country	Contractor X Personnel	Duration	FY	Contractor X Cost	Military Total Cost	Cost Savings
Mauritania	2 Eng	2 Weeks	14	\$96,468.00	\$27,355.44	(\$69,112.56)
Niger	2 Eng	4 Weeks	14	\$142,573.00	\$49,330.00	(\$93,243.00)
Uganda	2 Eng	2 Weeks	14	\$115,458.00	\$28,506.00	(\$86,952.00)
Burkina Faso	2 Eng	3 Weeks	15	\$121,137.00	\$38,211.46	(\$82,925.54)
Burundi	2 Eng	2 Weeks	15	\$115,457.00	\$25,618.48	(\$89,838.52)
Burundi	2 Eng	2 Weeks	15	\$115,457.00	\$25,618.48	(\$89,838.52)
Burundi	2 Eng	2 Weeks	15	\$142,226.00	\$25,618.48	(\$116,607.52)
Burundi	2 Eng	2 Weeks	15	\$118,493.00	\$25,618.48	(\$92,874.52)
Burundi	2 Eng	2 Weeks	15	\$118,521.25	\$25,618.48	(\$92,902.77)
Burundi	2 Eng	2 Weeks	15	\$118,492.50	\$25,618.48	(\$92,874.02)
Djibouti	2 Eng	2 Weeks	15	\$118,521.25	\$28,790.42	(\$89,730.83)
Djibouti	2 Eng	2 Weeks	15	\$118,492.50	\$28,790.42	(\$89,702.08)
Ethiopia	1 Eng	6 Weeks	15	\$111,816.00	\$79,580.80	(\$32,235.20)
Ethiopia	2 Eng	2 Weeks	15	\$94,794.00	\$28,441.60	(\$66,352.40)
Mauritania	2 Eng	2 Weeks	15	\$91,642.00	\$26,901.04	(\$64,740.96)
Niger	1 Eng	1 Year	15	\$591,213.00	\$326,801.80	(\$264,411.20)
Niger	2 Eng	2 Weeks	15	\$94,817.00	\$25,777.60	(\$69,039.40)
Niger	2 Eng	2 Weeks	15	\$94,817.00	\$25,777.60	(\$69,039.40)
Niger	2 Eng	3 Weeks	15	\$121,137.00	\$36,819.40	(\$84,317.60)
Uganda	2 Eng	2 Weeks	15	\$115,458.00	\$28,471.60	(\$86,986.40)
Uganda	1 Eng	3 Weeks	15	\$243,403.50	\$41,081.40	(\$202,322.10)
Uganda	1 Eng	3 Weeks	15	\$243,403.50	\$41,081.40	(\$202,322.10)
Uganda	1 Eng	2 Weeks	15	\$52,679.00	\$28,471.60	(\$24,207.40)
Chad	2 Eng	4 Weeks	16	\$152,551.00	\$52,079.20	(\$100,471.80)

Security assistance is a complex operation involving the whole of government. There are costs associated with the presence of U.S. military forces on foreign soil that contractors may not have to struggle with. The presence of Soldiers or Marines in Mogadishu, Somalia, would lead to increased security requirements, as well as diplomatic efforts to ensure their safety. It is anticipated that contractors are financially rewarded for the risk associated with operating in such an environment. Current personnel laws make it impossible to compensate military members adequately at the same rate. Furthermore, even if it was possible to reimburse members adequately for the risk, the potential costs associated with the kidnapping or injury of a Soldier or Marine far outweigh the costs of the same risk to a contractor. Future researchers need to develop

a model that will properly account for the political risk of using military personnel in lieu of contractors to determine if it is economically beneficial to continue to the practice.

In addition to the cost of risk, the opportunity cost associated with a smaller military force needs to be properly figured into the evaluation. The senior noncommissioned officers that would be utilized as trainers of foreign military forces are a relatively low-density asset within the military services. Each security assistance mission they perform is time spent away from their primary responsibility of training U.S. personnel. In a time of dwindling resources and reduced end strength, it is vital that we use military personnel appropriately. Future researchers should attempt to monetize those opportunity costs and include that computation into a full economic comparison of security cooperation engagements.

One possible way to mitigate the contractor's elevated cost is to change the contract type from a fixed price to a cost reimbursable type contract or a contract of mixed type with some CLNs fixed price and some cost reimbursable. By making the travel costs and per diem cost reimbursable, the risk would shift from the contractor to the government. This would significantly reduce the location specific cost risks and ultimately reduce the cost of the procured services.

The primary question this research examined is are there significant cost savings that can be achieved through the contracted delivery of training to foreign militaries as a part of the overall U.S. strategy of security cooperation?

From a financial point of view, there are no cost saving opportunities from contracting training engagements under the provisions of 120/2282 within the USAFRICOM AOR. These finding might be significantly different in other AORs that have a more robust infrastructure and are not subject to the hazardous area premium that are prevalent across the African continent.

Other economic considerations were out of the scope of this article that future researchers should examine before concluding that contracting is not a feasible solution for these training engagements.

The secondary question this research examined is it possible to measure the efficiency of training programs from a security cooperation standpoint?

Efficiency, defined as providing the same level of training at a lower cost can be determined from a financial point of view. Monetarily organic military forces can deliver the training at a significant savings to the U.S. government.

APPENDIX.

Figure 7. Military Cost Breakdown

Country	Contractor X			FY	Contractor X Cost	Number of Military Personnel		Weekly Pay Rate	Total Pay Entitlement	HDP-L Amount	Air Fare Cost	Per Diem Cost	Rental Car Cost	Military Total Cost	Cost Savings
	Personnel	Duration				Personnel	Duration2								
Niger	2 Eng	2 Weeks	13		\$98,397.36	2	2	\$3,610.33	\$14,441.32	\$300.00	\$3,326.12	\$4,928.00	\$2,730.28	\$25,725.72	(\$72,671.64)
Uganda	2 Eng	2 Weeks	13		\$85,425.00	2	2	\$3,610.33	\$14,441.32	\$200.00	\$2,990.96	\$8,820.00	\$1,303.40	\$27,755.68	(\$57,669.32)
Uganda	2 Eng	4 Weeks	13		\$153,597.72	2	4	\$3,610.33	\$28,882.64	\$200.00	\$2,990.96	\$17,640.00	\$2,606.80	\$52,320.40	(\$101,277.32)
Uganda	2 Eng	1 Week	13		\$70,797.18	2	1	\$3,610.33	\$7,220.66	\$200.00	\$2,990.96	\$4,410.00	\$651.70	\$15,473.32	(\$55,323.86)
Uganda	2 Eng	4 Weeks	13		\$153,597.72	2	4	\$3,610.33	\$28,882.64	\$200.00	\$2,990.96	\$17,640.00	\$2,606.80	\$52,320.40	(\$101,277.32)
Burkina Faso	1 Eng, 1 Trans	1 wk	14		\$66,176.00	2	1	\$3,601.00	\$7,202.00	\$300.00	\$3,316.00	\$3,612.00	\$623.02	\$15,053.02	(\$51,122.98)
Burundi	2 Eng	1 Week x 5	14		\$69,409.00	2	1	\$3,601.00	\$7,202.00	\$200.00	\$5,450.00	\$2,618.00	\$623.02	\$16,093.02	(\$53,315.98)
Burundi	2 Eng	1 Week x 5	14		\$69,409.00	2	1	\$3,601.00	\$7,202.00	\$200.00	\$5,450.00	\$2,618.00	\$623.02	\$16,093.02	(\$53,315.98)
Burundi	1 Eng, 1 Trans	2 wks	14		\$96,468.00	2	2	\$3,601.00	\$14,404.00	\$200.00	\$5,450.00	\$5,236.00	\$1,246.04	\$26,536.04	(\$69,931.96)
Chad	2 Eng	3 wks	14		\$146,385.00	2	3	\$3,601.00	\$21,606.00	\$200.00	\$4,828.00	\$15,708.00		\$42,342.00	(\$104,043.00)
Kenya	2 Eng	3 wks	14		\$117,108.00	2	3	\$3,601.00	\$21,606.00	\$200.00	\$3,032.00	\$17,220.00	\$1,383.18	\$43,441.18	(\$73,666.82)
Mauritania	1 Eng	2 wks	14		\$47,096.00	2	2	\$3,601.00	\$14,404.00	\$300.00	\$5,600.00	\$6,132.00	\$919.44	\$27,355.44	(\$19,740.56)
Mauritania	2 Eng	2 wks	14		\$96,468.00	2	2	\$3,601.00	\$14,404.00	\$300.00	\$5,600.00	\$6,132.00	\$919.44	\$27,355.44	(\$69,112.56)
Niger	2 Eng	4 wks	14		\$142,573.00	2	4	\$3,601.00	\$28,808.00	\$300.00	\$3,394.00	\$11,256.00	\$5,572.00	\$49,330.00	(\$93,243.00)
Uganda	2 Eng	2 wks	14		\$115,458.00	2	2	\$3,601.00	\$14,404.00	\$200.00	\$3,052.00	\$9,520.00	\$1,330.00	\$28,506.00	(\$86,952.00)
Burkina Faso	2 Eng	3 wks	15		\$121,137.00	2	3	\$3,592.40	\$21,554.40	\$300.00	\$3,316.00	\$11,172.00	\$1,869.06	\$38,211.46	(\$82,925.54)
Burundi	2 Eng	2 wks	15		\$115,457.00	2	2	\$3,592.40	\$14,369.60	\$200.00	\$5,450.00	\$5,236.00	\$362.88	\$25,618.48	(\$89,838.52)
Burundi	2 Eng	2 wks	15		\$115,457.00	2	2	\$3,592.40	\$14,369.60	\$200.00	\$5,450.00	\$5,236.00	\$362.88	\$25,618.48	(\$89,838.52)
Burundi	2 Eng	2 wks	15		\$142,226.00	2	2	\$3,592.40	\$14,369.60	\$200.00	\$5,450.00	\$5,236.00	\$362.88	\$25,618.48	(\$116,607.52)
Burundi	2 Eng	2 wks	15		\$118,493.00	2	2	\$3,592.40	\$14,369.60	\$200.00	\$5,450.00	\$5,236.00	\$362.88	\$25,618.48	(\$92,874.52)
Burundi	2 Eng	2 wks	15		\$118,521.25	2	2	\$3,592.40	\$14,369.60	\$200.00	\$5,450.00	\$5,236.00	\$362.88	\$25,618.48	(\$92,902.77)
Burundi	2 Eng	2 wks	15		\$118,492.50	2	2	\$3,592.40	\$14,369.60	\$200.00	\$5,450.00	\$5,236.00	\$362.88	\$25,618.48	(\$92,874.02)
Djibouti	2 Eng	2 wks	15		\$118,521.25	2	2	\$3,592.40	\$14,369.60	\$200.00	\$3,608.00	\$9,604.00	\$1,008.82	\$28,790.42	(\$89,730.83)
Djibouti	2 Eng	2 wks	15		\$118,492.50	2	2	\$3,592.40	\$14,369.60	\$200.00	\$3,608.00	\$9,604.00	\$1,008.82	\$28,790.42	(\$89,702.08)
Ethiopia	1 Eng	6 wks	15		\$111,816.00	2	6	\$3,592.40	\$43,108.80	\$200.00	\$2,672.00	\$33,600.00		\$79,580.80	(\$32,235.20)
Ethiopia	2 Eng	2 wks	15		\$94,794.00	2	2	\$3,592.40	\$14,369.60	\$200.00	\$2,672.00	\$11,200.00		\$28,441.60	(\$66,352.40)
Mauritania	2 Eng	2 wks	15		\$91,642.00	2	2	\$3,592.40	\$14,369.60	\$300.00	\$5,600.00	\$5,712.00	\$919.44	\$26,901.04	(\$64,740.96)
Niger	1 Eng	1 yr	15		\$591,213.00	1	52	\$3,592.40	\$186,804.80	\$1,800.00	\$1,697.00	\$64,064.00	\$72,436.00	\$326,801.80	(\$264,411.20)
Niger	2 Eng	2 wks	15		\$94,817.00	2	2	\$3,592.40	\$14,369.60	\$300.00	\$3,394.00	\$4,928.00	\$2,786.00	\$25,777.60	(\$69,039.40)
Niger	2 Eng	2 wks	15		\$94,817.00	2	2	\$3,592.40	\$14,369.60	\$300.00	\$3,394.00	\$4,928.00	\$2,786.00	\$25,777.60	(\$69,039.40)
Niger	2 Eng	3 wks	15		\$121,137.00	2	3	\$3,592.40	\$21,554.40	\$300.00	\$3,394.00	\$7,392.00	\$4,179.00	\$36,819.40	(\$84,317.60)
Uganda	2 Eng	2 wks	15		\$115,458.00	2	2	\$3,592.40	\$14,369.60	\$200.00	\$3,052.00	\$9,520.00	\$1,330.00	\$28,471.60	(\$86,986.40)
Uganda	1 Eng	3 wks	15		\$243,403.50	2	3	\$3,592.40	\$21,554.40	\$200.00	\$3,052.00	\$14,280.00	\$1,995.00	\$41,081.40	(\$202,322.10)
Uganda	1 Eng	3 wks	15		\$243,403.50	2	3	\$3,592.40	\$21,554.40	\$200.00	\$3,052.00	\$14,280.00	\$1,995.00	\$41,081.40	(\$202,322.10)
Uganda	1 Eng	2 wks	15		\$52,679.00	2	2	\$3,592.40	\$14,369.60	\$200.00	\$3,052.00	\$9,520.00	\$1,330.00	\$28,471.60	(\$24,207.40)
Chad	2 Eng	4 wks	16		\$152,551.00	2	4	\$3,592.40	\$28,739.20	\$200.00	\$4,828.00	\$18,312.00		\$52,079.20	(\$100,471.80)

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